

# SEQUENCE LISTING

<110> KYOWA HAKKO KOGYO CO., LTD.

<120> Anaerobic bacterium as a drug for cancer gene therapy

5 <130> DK04F318(US)

<140>

<141>

<150> JP 00/287688

<151> 2000-9-21

10 <160> 3

<210> 1

<211> 600

<212> DNA

<213> Bifidobacterium longum

15 <220>

<221> CDS

<222> (193)..(471)

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atgcgctagt atcattgatg acaacatgga ctaagcaaaa gtgcttgacc cctgacccaa 180
gaaggatgct tt atg gca tac aac aag tct gac ctc gtt tgc aag atc gcc 231

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Met Ala Tyr Asn Lys Ser Asp Leu Val Ser Lys Ile Ala

1

5

10

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25 cag aag tcc aac ctg acc aag gct cag gcc gag gct gct gtt aac gcc 279

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|    |             |  |             |             |             |             |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
|----|-------------|--|-------------|-------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|----|----|----|--|
|    | Gln         | Lys  | Ser         | Asn         | Leu         | Thr         | Lys | Ala | Gln | Ala | Glu | Ala | Ala | Val | Asn | Ala |     |  |    |    |    |  |
|    |             |  |             |             |             |             | 15  |     |     |     |     |     |     |     | 20  |     |     |  |    |    | 25 |  |
|    | ttc         | cag  | gat         | gtg         | ttc         | gtc         | gag | gct | atg | aag | tcc | ggc | gaa | ggc | ctg | aag | 327 |  |    |    |    |  |
|    | Phe         | Gln  | Asp         | Val         | Phe         | Val         | Glu | Ala | Met | Lys | Ser | Gly | Glu | Gly | Leu | Lys | .   |  |    |    |    |  |
| 5  | 30          |  |             |             |             |             |     | 35  |     |     |     |     |     |     |     | 40  |     |  |    | 45 |    |  |
|    | ctic        | acc  | ggc         | ctg         | ttc         | tcc         | gct | gag | cgc | gtc | aag | cgc | ccg | gct | cgc | acc | 375 |  |    |    |    |  |
|    | Leu         | Thr  | Gly         | Lue         | Phe         | Ser         | Ala | Glu | Arg | Val | Lys | Arg | Pro | Ala | Arg | Thr |     |  |    |    |    |  |
|    |             |  |             |             |             |             |     |     | 50  |     |     |     |     |     |     |     | 55  |  |    |    | 60 |  |
|    | ggc         | cgc  | aac         | ccg         | cgc         | act         | ggc | gag | cag | att | gac | att | ccg | gct | tcc | tac | 423 |  |    |    |    |  |
| 10 | Gly         | Arg  | Asn         | Pro         | Arg         | Thr         | Gly | Glu | Gln | Ile | Asp | Ile | Pro | Ala | Ser | Tyr |     |  |    |    |    |  |
|    |             |  |             |             |             |             | 65  |     |     |     |     |     |     |     | 70  |     |     |  | 75 |    |    |  |
|    | ggc         | gtt  | cgt         | atc         | tcc         | gct         | ggc | tcc | ctg | ctg | aag | aag | gcc | gtc | acc | gag | 471 |  |    |    |    |  |
|    | Gly         | Val  | Arg         | Ile         | Ser         | Ala         | Gly | Ser | Leu | Leu | Lys | Lys | Ala | Val | Thr | Glu |     |  |    |    |    |  |
|    |             |  |             |             |             |             | 80  |     |     |     |     |     |     |     | 85  |     |     |  | 90 |    |    |  |
| 15 | tgaccttctg  | ctcgtagcga                                       | ttactticgag | callactigac | gacaaagacc  | ccgaccgaga  | 531 |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
|    | lggltcggggi | ctttitglitg                                      | lggtgctgtg  | acgtigtgtc  | caaccgtaitt | aticcggiact | 591 |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
|    | agtlicagcg  |  |             |             |             |             | 600 |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
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|    | <211>       | 18   |             |             |             |             |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
| 20 | <212>       | DNA  |             |             |             |             |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
|    | <213>       | Artificial sequence                              |             |             |             |             |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
|    | <220>       |  |             |             |             |             |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
|    | <223>       | Description of Artificial Sequence:synthetic DNA |             |             |             |             |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |
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| 25 | gglttcgaata | acgcittta  |             |             |             |             |     |     |     |     |     |     |     |     |     |     | 18  |  |    |    |    |  |

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<212> DNA

<213> Artificial sequence

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<223> Description of Artificial Sequence:synthetic DNA

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cggttaactc aacgtttgta atc

23

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